

Massachusetts Institute of Technology
C. S. Draper Laboratory
Cambridge, Massachusetts

LUMINARY Memo #187

To: Distribution
From: D. Densmore
Date: 18 December 1970
Subject: Luminary Revision 192

The following changes were implemented in Revision 192: PCR 1091, PCR 1093, PCR 1079, and corrections to PCR 1097. 2.

1) PCR 1091 (Priority Display light on DSKY).

A new DSKY light will be used as a super key release light. It is controlled by bit 1 of DSPTAB +11D.

- a) The new light will be turned on when a priority display is put up.
- b) It will be turned off on a response to the display (PRO, V33E, V32E, V34E).
- c) It will be turned off on a V37, V36, V56, or hardware or software restart.
- d) RTB routine SIGNMPAC (10 words) was moved from Bank 10 to Bank 14 to make room for the changes in the Display Interface Routines to set and reset the bit.

This new light will alert the astronaut that a priority display from P20 is waiting to come up if he is using the DSKY over a foreground program and the key release light is already on.

2) PCR 1093 (Eliminate the 481 day restriction on TEPHEM).

- a) The scaling of the constant CSTODAY was changed from B-33 to B-32 to avoid overflow at TEPHEM = 481 days. The overflow occurred in the quantity $(TGET + TEPHEM)/CSTODAY$. With CSTODAY larger in memory overflow is avoided.
- b) In two places after the computation of this quantity, re-scaling was done to bring the values back up to what they were before division by the "larger" CSTODAY conversion factor.

3) PCR 1079 (Put ALMCADR on the telemetry).

ALMCADR went into those lists where there was a spare word: Word 2 of Descent/Ascent, word 99 of Orbital Maneuvers, word 67 of Rendezvous and Prethrust, and word 68 of AGS Initialization and Update Program list.

4) PCR 1097. 2 (Unshare N26 erasables).

- a) An EBANK = N26/PRI was inserted to tell the assembler about the EBANK change in Pinball Game.
- b) An absolute SETLOC in Pinball Game caused conflict when bank moving was done to make room for this change. It was changed to a relative SETLOC.

GSOP impact:

The following items should be examined for impact on the various GSOP sections:

section 2	items 1, 3
section 4	item 1
section 5	item 2